

Maintenance and Inspection Schedule

EVAPORATIVE CONDENSER: Refer to BAC "Common Operation & Maintenance Manual and VCA O&M manual; generally follow IIAR Bulletin 110

Service Requirement or Procedure	Start-up	Daily	Monthly	Quarterly	Annually
Inspect and clean as necessary:					
Inspect general condition of the unit and check for unusual noise and vibration.	X	X			
Clean and flush basin.	X				X
Check and adjust water level in remote sump	X	X			
Check operation of water make-up valve	X	X			
Check and adjust bleed rate	X		X		
Inspect heat transfer section	X				X
Inspect protective finish					X
Mechanical equipment system:					
Check belt condition	X	X			
Check belt tension	X	X			
Lubricate fan motor and shaft bearings	X			X	
Lubricate motor base adjusting nut	X			X	
Check drive alignment					X
Check motor voltage and current	X				X
Check fan bearing locking collars	X				X
Check fan motors for proper rotation	X	X			
Check fans for rotation without obstruction	X	X			
Condenser adequately anchored and supported.	X				X
Condenser access for normal service is safe for maintenance and service persons.		X			
Condenser inspected for corrosion		X			
Independent Inspection					X(5 yr)
Lines and equipment labeled.					X
Valves tagged.					X

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COMPRESSORS: Generally refer to IIAR Bulletin 110, for specific task refer to manufacturers manual.

Service Requirement or Procedure	Daily	Monthly(M) Quarterly (Q) Annual (A)	5,000 Hours	10,000 Hours	25,000 Hours
SCREW COMPRESSORS: Refer to: Vilter; FES; M&M manuals					
Suction, Discharge, Oil Pressure and Temperatures. (IIAR)	X				
Oil level, oil added, oil removed. (IIAR)	X				
Mechanical Inspection; belts, guards (IIAR)		X (Q)			
Compressor Drive alignment, foundation bolts, drive, end float. (IIAR)		X (A)			
Service Requirement or Procedure	Daily	Monthly(M) Quarterly (Q) Annual (A)	5,000 Hours	10,000 Hours	25,000 Hours
Test low suction pressure, high discharge pressure, oil pressure failure, low and high temperature switches. (IIAR)		X (A)			
Verify nameplate data: mfg. name, serial number, model, year of mfg, refrigerant used, MAWP, test press, leak press. rotation (cast in block) and speed in r.p.m. (ANSI/IIAR 2)		X (A)			
Compressor shaft seal: Check and repair if needed. (OEM)			X		
Compressor unloader: Check and repair if needed. (OEM)			X		
Suction strainer. Dismantle and clean. (OEM)		1 st . 200 hrs.			
Compressor motor. Grease. (OEM)			X		
Compressor bearings. Dismantle and check. Replace if necessary (OEM)				X	
Oil pump. Dismantle and check. Replace if necessary (OEM)				X	
Compressor Oil. Take sample. Replace oil (OEM)				X	
Coalescer Elements. Replace. (OEM)				X	
Oil Separator. Flush and Drain. (OEM)				X	
Compressor thrust bearings. Dismantle and check. Replace. (OEM)					X
Compressor Main/ Side bearings. Replace (OEM)					X
Compressor "O" rings. Replace. (OEM)					X
Compressor gaskets. Replace. (OEM)					X
Complete Mechanical Integrity form		X (A)			

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RECIPROCATING COMPRESSORS: Refer to Mycom; Vilter manuals	Daily	Quarterly	6 months	Annual
Suction, Discharge, Oil Pressure and Temperatures. (IIAR)	X			
Oil level, oil added, oil removed. (IIAR)	X			
Check head temperature. (OEM)	X			
Compressor motor and belts. (OEM)	X			
Compressor CUNO filter: turn handle 4 turn. (OEM)	X			
Test safety controls and interlocks. (OEM)				X
Compressor shaft seal: Check for oil and refrigerant leaks. (OEM)	X			
Compressor motor. Grease. (OEM)		X		
Change oil and oil filter (OEM)			X	
Oil sample. Take sample. Change oil and clean internal strainer. (OEM)				X
Suction and Discharge Valves. Disassemble and repair if necessary. (OEM)				X
Complete Mechanical Integrity form				X

AMMONIA PUMPS: Viking Technical Service manual and Heavy Duty Pump manual; Generally refer to IIAR Bulletin 110

Service Requirement or Procedure	Daily	Annual
Test controls, float switches, timers. (IIAR)		X
Examine exterior and adjacent lines for corrosion or damage. (IIAR)		X
Exercise valves; clean and grease valve stems. (IIAR)		X
Monitor and record transfer counter	X	
Grease motor		X
Complete Mechanical Integrity form		X

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PRESSURE VESSELS: (HPRs, ACC, LTU, SURGE DRUMS, etc.)

Service Requirement or Procedure	Daily	Annual	5 years
Check external condition. (IIAR)	X	X	X
Monitor ammonia levels	X		
Monitor oil accumulation/drain oil. (IIAR)		X	
Test controls, float switches, limit switches safeties. (IIAR)		X	
Exercise valves; clean and grease valve stems. (IIAR)		X	
Check all control valves for proper operation. (IIAR)		X	
Inspect safety relief valves. (IIAR)		X	
Replace Safety Relief valves. (IIAR)			X
Inspect vessel insulation. (IIAR)		X	X
Inspect vessel and piping support. (IIAR)		X	X
Paint as necessary. (IIAR)		X	
Valves tagged; lines labeled. (IIAR)		X	
Complete Mechanical Integrity form		X	

Hydro-Cooler: Generally refer to IIAR Bulletin 110

Service Requirement or Procedure	Daily	Annual	5 years
Monitor Temperature (when in use)	X		
Monitor hydro-cooler water pH	X		
Monitor for ammonia leaks.	X		
Check external condition. (IIAR)		X	X
Clean water screens	X		
Check operation of circulation pumps	X		
Inspect pump and motor; rebuild as required.		X	
Grease pump motor bearings.		X	
Test controls, float switches, limit switches safeties. (IIAR)		X	
Exercise valves; clean and grease valve stems. (IIAR)		X	
Check all NH3 control valves for proper operation. (IIAR)		X	
Inspect piping and components for corrosion. (IIAR)		X	X
Inspect and repair piping and vessel insulation (as needed). (IIAR)		X	
Paint as necessary. (IIAR)		X	
Verify surge drum, hydro-cooler coil, tank and piping for proper anchoring and support. (IIAR)		X	X
Verify all valves to atmosphere are capped or plugged. (IIAR)		X	
Drain oil from surge drum drop leg.		X	
Complete Mechanical Integrity form		X	

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COLD STORAGE ZONES (Common or CA Rooms): Colmac IOM manuals; Krack; Generally refer to IIAR Bulletin 110

Service Requirement or Procedure	Daily	Quarterly	Annual	5 years
Ammonia detector calibrated. (OEM)		X	X	
Ammonia detector dialer test. (OEM)		X		
Piping properly supported.			X	X
Test automatic controls for proper operation. (IIAR)			X	
Check all NH3 control valves for proper operation. (IIAR)			X	X
Exercise valves; clean and grease valve stems. (IIAR)			X	
Inspect piping and components for corrosion. (IIAR)			X	X
Inspect and repair insulation (as needed). (IIAR)			X	
Paint as necessary. (IIAR)			X	
Valves tagged and lines labeled			X	
All valves opening to atmosphere are plugged or capped. (IIAR)			X	
Drain oil from surge drum drop leg.			X	

EVAPORATORS: Colmac IOM manuals; Krack; Generally refer to IIAR Bulletin 110

Service Requirement or Procedure	Daily	Annual	5 years
Monitor for ammonia leaks. (OEM)	X		
Monitor Temperature (when in use)	X		
Motors and evaporator free of vibration. (IIAR)	X	X	
Fans Guards/Nozzles in place. (OEM)		X	
Evaporator properly defrosted. (IIAR)	X		
Evaporator properly supported		X	
Piping properly supported.		X	
Inspect unit and piping for corrosion. (IIAR)		X	X
Complete Mechanical Integrity form		X	